United States Department of the Interior
Bureau of Land Management

Environmental Assessment for the Renewal of the Grazing Permit on the LU 257 Allotment #04547

Little Snake Field Office
455 Emerson Street
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CHAPTER 1 - INTRODUCTION

1.1 IDENTIFYING INFORMATION

PROJECT NAME**:** Renewal of the grazing permit on the LU 257 Allotment #04547.

CASEFILE/ALLOTMENT NUMBER: 0505047/04547

1.2 PROJECT LOCATION AND LEGAL DESCRIPTION

LEGAL DESCRIPTION: see Allotment Map, Attachment 1.

LU 257 Allotment #04547 T10N R93W por. Sec. 28

ALLOTMENT SUMMARY: 219 acres BLM LU
6 acres private
225 acres total

COUNTY AND GENERAL LOCATION: Moffat County. The allotment is located immediately northwest of Great Divide, Colorado.

LANDSCAPE DESCRIPTION: This small allotment is located within a rolling landscape and is characterized by gentle, mostly northerly slopes. Bighole Gulch, a sub-irrigated, intermittent drainage crosses the northerly portion of the allotment. Elevations range from close to 7,000 feet along the southern border to 6,845 feet where Bighole Gulch exits the northeastern boundary.

CLIMATE/PRECIPITATION SUMMARY: The allotment experiences a semi-arid climate with cold, snowy winters and warm summers. Data from the nearby Great Divide Remote Automated Weather Station (RAWS) between 1991 and 2004 indicates average July temperatures of 69°F and average January temperatures of 22°F. During this time the mean annual precipitation was 8.9 inches with a maximum of 35 inches and a minimum of 4 inches annually.

1.3 BACKGROUND

The LU 257 Allotment #04547 has been grazed by livestock since the late 19th century. It is adjacent to the former town of Great Divide which was a community founded on the potential of dry-land agriculture in the area. All of the public lands comprising the allotment were patented under the Homestead Act at one time. Since the area's suitability for dry-land agriculture was marginal at best, a number of these patented lands in the Great Divide area were abandoned. In 1937, the Bankhead-Jones Farm Tenant Act allowed for the re-acquisition of these lands by the General Land Office (later the BLM). While these formerly patented lands are public and managed under all the same applicable laws as other public lands, fees generated from these lands, such as grazing fees and mineral royalties are placed in different accounts, hence the need to show them differently on maps and other documents.

The original applicant, Lonnie Hedges, had been the permittee on this allotment since 2000. His preference was through a lease of attached base property owned by Don Hogue. Since Hedges acquisition of the grazing preference, the allotment has been permitted as a spring-only cattle allotment with use limited to 30 days and beginning as early as May 1. This spring-only pasture is part of a much larger grazing operation on mostly private lands. May 1, however, is generally too early for use on this allotment. In most years much of the potential forage is unavailable. Turnout has typically not been until late May or early June, when key forage species are in full growth and high vigor, but use has been limited to two weeks or less because of the June 12 off date. The change in dates is requested to make better use of available spring forage when it is most available while retaining the same 30 day grazing window. The base property lease to Lonnie Hedges is not being renewed and the permit is being transferred back to Don Hoque as the owner of the base property. He has applied for the same terms and conditions as Hedges and the permit is being transferred to him concurrent with this renewal.

1.4 PURPOSE AND NEED

BLM permit #0501274, which authorized livestock grazing on the LU 257 Allotment #04547 expired on August 1, 2014. This permit was based on a lease of the base property. The permit is being transferred back to the base property owner under permit #0504047. This permit is subject to renewal at the discretion of the Secretary of the Interior, who delegated the authority to BLM, for a period of up to ten years. BLM has the authority to renew the livestock grazing permits and leases consistent with the provisions of the *Taylor Grazing Act, Public Rangelands Improvement Act, Federal Land Policy and Management Act,* and Little Snake Field Office's *Record of Decision and Resource Management Plan.* This plan includes the *Colorado Public Land Health Standards* and the *Guidelines for Grazing Management.*

BLM is required to provide for public uses of public land resources under the principles of multiple use and sustained yield. Among these uses is the allocation of forage for the purposes of domestic livestock grazing. BLM allocates grazing privileges in a manner that ensures orderly and sustainable consumption of forage while ensuring that wildlife habitat, vegetative, and soil resources remain healthy and provide for a wide array of other public benefits.

The following Environmental Assessment (EA) will analyze the impacts of livestock grazing on public land managed by the BLM. The analysis will recommend terms and conditions to the permit/lease which improve or maintain public land health. The Proposed Action and Alternatives will be assessed for meeting land health standards.

In order to graze livestock on public land, the livestock producer (permittee/lessee) must hold a grazing permit/lease. The grazing permittee has a preference right to receive the permit if grazing is to continue. The land use plan allows grazing to continue. This EA will be a site specific look to determine if grazing should continue as provided for in the land use plan and to identify the conditions under which it can be renewed.

The action is needed to respond to an expiring permit. The permittee has filed an application to continue grazing.

1.4.1 Decision to be Made

BLM is to decide whether or not to reissue the grazing permit and under what terms it may be reissued.

1.6 PLAN CONFORMANCE REVIEW

The Proposed Action and Alternatives are subject to and have been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Little Snake Record of Decision and Resource Management Plan (RMP)

Date Approved: October 2011

Decision Language: The Proposed Action and Alternatives are consistent with the Little Snake Record of Decision and Resource Management Plan, Livestock Grazing Management goals to manage resources, vegetation, and watersheds to sustain a variety of uses, including livestock grazing, and to maintain the long-term health of the rangelands; provide for efficient management of livestock grazing allotments; and contribute to the stability and sustainability of the livestock industry.

Section/Page: 2.14 Livestock Grazing/RMP-41

1.7 PUBLIC PARTICIPATION

1.7.1 Scoping: NEPA regulations (40 CFR §1500-1508) require that the BLM use a scoping process to identify potential significant issues in preparation for impact analysis. The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis.

External Scoping Summary: The action in this EA is included in the NEPA log posted on the LSFO web site: http://www.blm.gov/co/st/en/BLM_Information/nepa/lsfo.html.

The Little Snake Field Office sent out a Notice of Public Scoping to all interested parties on December 28, 2012 to determine the level of public interest, concern, and resource conditions on the grazing authorizations that were due for renewal in fiscal year 2014. No comments were received. Individual letters were sent to the affected permittee/lessee informing them that their permit and/or lease was due for renewal and requesting any information they wanted included or taken into consideration during the renewal process. The issuance of a grazing permit is being carefully analyzed within the scope of the specific action being taken, resources issues or concerns, and public input received.

Persons/Agencies Consulted: Ann Hedges, Don Hoque

Internal Scoping Summary: The Proposed Action and Alternatives were presented to the LSFO NEPA interdisciplinary team at the weekly priorities meeting on February 18, 2014. The need to maintain and improve the riparian conditions along Bighole Gulch was identified.

Issues Identified: No issues were identified during public scoping.

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

The purpose of this chapter is to provide information on the Proposed Action and Alternatives.

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 Proposed Action

Renew the grazing permit #0505047 on the LU 257 Allotment #04547 for 10 years, expiring February 28, 2024. The permit would be renewed as follows:

From:

Allotment	Livestock	Dates			
Name & Number	Number & Kind	Begin	End	%PL	AUMs
LU 257 #04547	18 Cattle	05/01	06/12	100	25

The above permit is subject to the following Special Term and Condition:

1) Livestock grazing will only be authorized on this allotment during a 30 day or less period from May 1 to June 12.

To:

Allotment	Livestock	Dates			
Name & Number	Number & Kind	Begin	End	%PL	AUMs
LU 257 #04547	20 Cattle	05/24	06/30	100	25

1) Livestock grazing will only be authorized during a 30 day or less period from May 24 to June 30.

2) Livestock must be removed from the allotment by June 23 every other year.

The above permit would be subject to the Standard and Common Terms and Conditions, see Attachment 2.

Drought Management

The forage allocation on the above permit reflects forage available for livestock during years of average or above average precipitation. During periods of regional drought, the amount of available forage on the allotment may not be sufficient to provide for all or part of the livestock demand and still provide forage and cover for wildlife and for soil protection. Identification of

drought and the description of appropriate responses are listed in Attachment 3. Drought management actions would not be attached to the grazing permit, but rather analyzed here so, if necessary, the analysis of them in this document may be used as a basis for issuing a grazing decision in response to drought conditions.

2.2.3 No Action Alternative

Renew the permit with the existing mandatory and special terms and conditions. The Standard and Common Terms and Conditions would continue to apply.

2.2.4 No Grazing Alternative

The grazing permit would not be renewed and the existing permit would be cancelled. The existing grazing preference attachment for the LU 257 Allotment #04547 to offered base property would be severed. The allotment would be closed to livestock grazing.

CHAPTER 3 – AFFECTED ENVIRONMENT AND EFFECTS

3.1 INTRODUCTION

Affected Resources:
The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 1 lists the resources considered and the determination as to whether they require additional analysis.

Table 1. Resources and Determination of Need for Further Analysis

Determination[1]	Resource	Resource Issue/ Rationale for Determination	Specialist Initials	Date
Physical Resources				
NI	Air Quality	Activities associated with grazing that may affect air quality, namely dust and exhaust from ranch operation vehicles as well as dust from livestock hoof action, fall below EPA emission standards for the six criteria pollutants of concern (sulfur dioxide, nitrogen oxide, ground-level ozone, carbon monoxide, particulate matter [both PM2.5 and PM10], and lead). Furthermore, ranch operation and livestock activities are not a significant source of these pollutant emissions that do occur in Moffat County. Impacts to air quality caused by either alternative are therefore considered negligible.	ES	2/19/14
NI	Floodplains	There are FEMA-identified 100-year floodplains within the allotment that is subject to rare flooding. None of the alternatives analyzed include development within identified floodplains. No threat to human safety, life, welfare and property would result from implementing any of the alternatives.	ES	2/19/14
NI	Hydrology, Ground	There are no well or other projects proposed that would have an effect on ground water hydrology.	JHS	3/11/14
NP	Hydrology, Surface	See Water Quality, Surface	ES	2/19/14
NI	Minerals, Fluid	Two wells are located within the allotment, but would not be affected by the Proposed Action or Alternatives.	TW	3/4/14
NI	Minerals, Solid	There are no solid mineral authorizations in the LU 257 Allotment.	JM	2/24/14

Determination[1]	Resource	Resource Issue/ Rationale for Determination	Specialist Initials	Date
PI	Soils	See Section 3.2.1	ES	3/6/14
NI	Water Quality, Ground	There are no wells or other projects that proposed that would have an effect on ground water quality. The timing and intensity of proposed livestock grazing is not at a level that would affect ground water.	JHS	3/11/14
NP	Water Quality, Surface	There is no perennial, flowing surface water present on public lands within the allotment. Any surface runoff from the LU257allotment would flow into Bighole Gulch, an ephemeral tributary to the Little Snake River, the confluence of which is >18 miles downstream. There are no water quality impairments or suspected water quality issues identified by the Colorado Department of Public Health and Environment Water Quality Control Commission for surface waters within reasonable influence of grazing activities that currently occur or are proposed to occur on the allotment. No obvious beneficial impacts would be incurred with the No Grazing Alternative.	ES	2/19/14
Biological Resources				
PI	Invasive, Non-native Species	See Section 3.3.1	CBR	3/3/2014
PI	Migratory Birds	See Section 3.3.2	DMA	3/6/14
PI	Special Status Animal Species	See Section 3.3.3	DMA	3/6/14
NP	Special Status Plant Species	There are no federally listed threatened, endangered, or BLM sensitive plant species populations present on this allotment.	ARH	3/3/2014
PI	Upland Vegetation	See Section 3.3.4	JHS	2/19/14
PI	Wetlands and Riparian Zones	See Section 3.3.5	ES	3/6/14
NP	Wildlife, Aquatic	There are no aquatic wildlife that derive important habitat from the allotment.	DMA	3/6/14
PI	Wildlife, Terrestrial	See Section 3.3.6	DMA	3/6/14
NP	Wild Horses	The allotment does not lie within any wild horse Herd Management Area.	JHS	2/19/14
Heritage Resources and the Human Environment				
PI	Cultural Resources	See Section 3.4.1	KR	3/11/04
NI	Environmental Justice	Neither the Proposed Action nor Alternatives would not impact populations and would not have disproportionate or	LM	2/27/14

Determination[1]	Resource	Resource Issue/ Rationale for Determination	Specialist Initials	Date
		adverse human health or environmental effect on minority or low-income populations.		
NP	Hazardous or Solid Wastes	There are no hazardous or solid wastes present on the allotment. While there are two gas wells present on the allotment, there are no substances stored on these sites or present in quantities that fall into the classification of hazardous waste.	JHS	3/11/14
NP	Lands with Wilderness Characteristics	Subject to WO-IM 2011-154 and in accordance with BLM policy, the proposed project is in an area that did not meet the minimum size requirements for inventory finding of the presence of lands with wilderness characteristics.	GR	2/24/14
NP	Native American Religious Concerns	There are no known items, sites, or landscapes determined as culturally significant to the tribes within or immediately adjacent to the permit area. The proposed action does not prevent access to any known sacred sites, prevent the possession of sacred objects, or interfere with the performance of traditional ceremonies and/or rituals.	KR	3/11/14
NI	Paleontological Resources	The surface geology is Potential Fossil Yield Classification 3, moderate or unknown potential. There are no known paleontological resources that occur in the project area.	JM	2/24/14
NI	Social and Economic Conditions	There would not be any change to local social or economic conditions.	LM	2/27/14
NI	Visual Resources	The proposed project is located in a VRM Class III area where moderate change to the characteristic landscape would be allowed as long as the existing characteristics of the landscape are partially retained. Visual Resource Inventory is low based on Scenic Quality Rating of C and Sensitivity Level Rating of Low. No impacts to visual resources would be anticipated for all alternatives.	GR	2/24/14
Resource Uses				
NI	Access and Transportation	There would not be major impacts to access and/or transportation in the project area. Motorized use i.e. OHV will be limited to existing and or designated roads and trails only unless authorized by BLM.	DA	3/3/14
NI	Fire Management	None of the alternatives proposing grazing use would result in any changes in regards to fire management. The no grazing alternative would result in a greater accumulation of fine fuels, this would not	JHS	3/11/14

Determination[1]	Resource	Resource Issue/ Rationale for Determination	Specialist Initials	Date
		result in any changes in how fire in managed throughout the allotment or surrounding areas.		
NP	Forest Management	There are no forest resources present on the allotment.	JHS	2/19/14
NI	Livestock Operations	The Proposed Action is a minor adjustment of the existing livestock operation.	JHS	2/26/14
NI	Prime and Unique Farmlands	There are no prime and unique soils present within the allotment; however, there are soil types designated "farmland of statewide importance" within the allotment. Generally, farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. None of these soils are or would become irrigated or otherwise manipulated so as to create conditions favorable to create prime farmland on public lands within the allotments.	ES	2/19/14
NI	Realty Authorizations, Land Tenure	There are four realty authorizations within the project area; however they would not be impacted by the Proposed Action or Alternatives. There are no land tenure adjustments currently within the project area.	LM	2/27/14
NI	Recreation	There would be no major impacts to recreation in this project area.	DA	3/3/2014
Special Designations				
NP	Areas of Critical Environmental Concern	There are no ACECs within or in close proximity to the LU 257 Allotment.	GR	2/24/14
NP	Wild and Scenic Rivers	There are no WSRs within or in close proximity to the LU 257 Allotment.	GR	2/24/14
NP	Wilderness Study Areas	There are no WSAs within or in close proximity to the LU 257 Allotment.	GR	2/24/14

[1] NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.

3.2 PHYSICAL RESOURCES

3.2.1 Soils

Affected Environment: Table 1 describes the three major soil groups included within the LU 257 Allotment #04532. Soils within the allotment are predominantly sand and loam-based and are suitable for grazing, forestland, and/or wildlife habitat. The main hazard for soils in this area is erosion unless close-growing plant cover is maintained.

Table 1. Soil Summary for the LU257 Allotment

Soil Map Unit (MU) & Soil Name	Map Unit Setting	Description

MU 14 Berlake-Maysprings complex, 3 to 12% slopes	*Elevation:* 6,500 to 7,300 feet *Mean annual precipitation:* 13 to 15” *Ecological Site:* Sandy Foothills/Rolling Loam	These plateau and toeslope soils are well drained with moderate permeability and medium runoff potential. Available water capacity is low and the soil profile is typically up to 60 inches deep, composed primarily of course sandy loams and sandy clay loams. These soils are highly susceptible to water erosion when left unprotected. Maintenance of cover helps reduce the potential for erosion and preserve the valuable topsoil layer.
MU 15 Berlake-Taffom-Gretdivid complex, 10-20 % slopes	*Elevation:* 6,200 to 7,300 feet *Mean annual precipitation:* 13 to 15” *Ecological Site:* Deep Loam/ Rolling Loam/Sandyland	These hillslope soils are well drained with moderate permeability and medium runoff potential. Available water capacity is low to moderate and the soil profile is typically 18 to 60 inches deep, composed primarily of course sandy loams and sandy clay loams.
MU 44 Cowestglen sandy loam, 0 to 3% slopes	*Elevation:* 6,000 – 6,800 feet *Mean annual precipitation:* 11-13” *Ecological Site:* Foothills Swale	These terrace and floodplain soils are well drained with moderately rapid permeability and very low runoff potential. Available water capacity is moderate and the soil profile is typically 60 inches deep, composed of sandy loam and stratified sand to loam.

Data taken from *Soil Survey of Moffat County Area, Colorado (2004)*

Environmental Consequences, Proposed Action: Soils within the allotment are the least susceptible to disturbance and wind/water erosion when frozen/ snow covered or when wet or moist (late fall through early spring). The proposed grazing period during the spring to early summer, combined with proposed early removal of livestock every other year and low stocking rate, would not cause or exacerbate damage to soil health and function if the existing healthy vegetative community (see Upland Vegetation section) is maintained. The inclusion of a drought management plan would further protect soils by temporarily removing or reducing livestock pressure from the allotment until the vegetation community shows signs of adequate recovery.

Environmental Consequences, No Action: This alternative would have very similar impacts to those described above. However, drought management planning and subsequent actions would only occur on either a voluntary basis or through BLM actions based on a separate NEPA analysis, which may incrementally harm soil communities during exceptionally dry periods.

Environmental Consequences, No Grazing Alternative: Removal of livestock from public lands would lead to decreased hoof compaction of soil surfaces, especially in the Bighole Gulch riparian area where livestock would tend to congregate, particularly if grazing were allowed during the summer. Over time, the lack of compaction, combined with the annual freeze-thaw cycle, would lead to a decrease in soil bulk density and improved soil moisture conditions, which would facilitate seed germination and root development. Removing

livestock would also result in an increase of both plant litter and live vegetative ground cover that would provide more protection from wind and water erosion. Any livestock trails and the resulting erosion would heal over time.

Environmental Consequences, Cumulative Impacts: Past, present, and reasonably foreseeable actions that affect soils in the Great Divide area primarily include ranching, some fluid mineral exploration and development, and the infrastructural development necessary to support these two activities. The majority of livestock grazing impacts occur around existing water sources such as streams, springs, troughs, stock ponds, areas providing cover or shade, and along fence lines where livestock tend to trail. The soils within and closely surrounding these areas receive heightened use and may exhibit signs of soil compaction, erosion, and reduced productivity.

Populations of wild ungulates, including mule deer, elk and pronghorn antelope occur in the area, especially during the fall and winter. These animals make use of forage and artificial water sources, resulting in some of the same impacts to soils from concentration and trailing as livestock. Many of these impacts would continue to occur, though in the absence of grazing, the upland water sources would likely be abandoned or removed; the trailing impacts, particularly on steeper slopes, would continue to occur.

Oil and gas activities occur in the area in a limited amount. However, there has been a recent renewal of interest in the area and development may be on the rise. Most of this activity has occurred to date on private lands. Development of subsurface minerals includes the removal of top soil and exposure of subsurface soils. These areas of decreased vegetation and litter cover are generally more susceptible to soil erosion, increased runoff, and infestation by invasive, non-native plant species. Some restoration work has occurred at the pad sites to limit the amount of soil erosion, but bare soil still remains in places. Development on public lands always includes mitigation measures to reduce or eliminate these impacts; however, development on private land may not be as closely monitored or mitigated.

The primary impact to soils from infrastructural development has been disturbance, spread of invasive species, runoff and off-site sedimentation associated with road construction, maintenance, and use. The nature and extent of the impact varies with the type of road, the extent of use, and the level of maintenance. For example, primitive 4WD roads, and ATV trails are naturally surfaced and rarely used or maintained, making them susceptible to potentially severe gullying and rilling, especially on grades. Naturally surfaced and gravel-surfaced roads also occur in the valley. Although the extent of use and level of maintenance varies, these roads typically are used more often and receive a higher level of maintenance than primitive roads and trails. Because these types of roads are often used for fluid mineral activities, most have engineered designs and appropriately spaced culverts to drain runoff. As a consequence, these roads are far less likely to erode, though runoff and off-site sedimentation still occur.

3.3 BIOLOGICAL RESOURCES

3.3.1 Invasive/Non-Native Species

Affected Environment: Invasive plant species and noxious weeds occur within the affected area. Downy brome, Canada thistle, musk thistle, scotch thistle, and knapweeds occur within or near this area. Other species of noxious weeds could be introduced by vehicle traffic, livestock, wildlife, and other means of dispersal. Principles of Integrated Pest Management (IPM) are employed to control noxious weeds on BLM lands in the LSFO.

Environmental Consequences, Proposed Action and No Action: Access to public lands for dispersed recreation, hunting, livestock grazing management, livestock and wildlife movement, as well as wind and water, can cause weeds to spread. Surface disturbance from livestock concentration and human activities associated with grazing operations can increase weed presence. The largest concern in the allotment would be for biennial and perennial noxious weed infestations to establish and not be detected. Once an infestation is detected it could be controlled with various IPM techniques. Land practices and land uses by the livestock operator and their weed control efforts and awareness would largely determine the identification of potential weed infestations within the allotment.

Environmental Consequences, No Grazing Alternative: This alternative removes the spread and introduction of weeds by livestock. Additional sources of seed dispersal would still be present throughout the allotment. However, under this alternative there would be no presence by the grazing permittee to assist with detection of infestations.

Environmental Consequences, Cumulative Impacts: Under the Proposed Action and No Action alternatives weed infestation and dispersal through livestock transport may increase on a potential of 219 acres of BLM land. This increased risk would be an acceptable level as managed under the grazing lease and weed management partnerships.

3.3.2 Migratory Birds

Affected Environment: Migratory bird habitats on the allotment are comprised of sagebrush stands and grasslands. A variety of migratory birds may utilize these vegetation communities during the nesting period (May through July) or during spring and fall migrations. The allotment provides potential habitat for several species on the USFWS's Birds of Conservation Concern (BCC) List.

BCC species associated with shrubland habitats in the LSFO include Brewer's sparrow, sage sparrow and sage thrasher. All three birds are summer residents in Colorado and all but the loggerhead shrike nest in sagebrush stands. Nests can be constructed in sagebrush or other shrubs, with some species nesting under shrubs. All species would likely be nesting in the general area from mid-May through mid-July.
Raptor species are tied to several different habitat types with in the LSFO. Sagebrush and other shrublands provide open spaces for hunting, while rocky outcrops, woodlands, sporadic trees and cottonwood forests provide nesting substrates. Red-tailed hawk, golden eagle and bald eagle likely nest and hunt near the two allotments. There is one known red-tailed hawk nest located on the allotment.

More generally, birds associated with this allotment are well distributed in extensive suitable habitats throughout the LSFO and northwest Colorado and habitat-specific bird assemblages appear to be composed and distributed appropriately to the normal range of habitat variability.

Environmental Consequences, Proposed Action and No Action: While livestock grazing can directly impact reproductive success of migratory songbirds by trampling of nests, it is more likely that it indirectly influences reproductive success due to changes in vegetation such as species composition, height, or cover. Both alternatives would permit grazing by cattle for 30 days each spring. This short term grazing window would allow for adequate plant recovery, regrowth, and seed dissemination. This type of grazing schedule would be compatible with habitat needs of migratory bird species on the allotment. Both of these alternatives would also maintain habitat for small mammals, which serve as prey species for golden eagles and other raptors.

Environmental Consequences, No Grazing Alternative: This alternative may lead to increases/improvements in vertical structure, composition and density of herbaceous understory on the allotment as a whole from current conditions. Benefits associated with livestock removal would be most expected in those areas that currently experience concentrated livestock use, such as water sources. Response by migratory birds to vegetative changes would depend on the species, providing the greatest benefit to ground and low shrub nesters.

Cumulative Impacts: The primary use of the allotments and the surrounding area is livestock grazing, recreation (hunting), and oil and gas development. Continuation of grazing would not be expected to add substantially to existing or proposed disturbances.

3.3.3 Special Status Animal Species

Affected Environment: There are no ESA listed or proposed species that inhabit or derive important benefit from habitats on the allotment.

The allotment provides habitat for greater sage-grouse, a BLM sensitive species and a candidate for ESA listing. The entire allotment is mapped as Preliminary Priority Habitat (PPH) due to the proximity of several active leks in the area. However, the lek adjacent to the allotment has not been active since 2003. This is likely due to the number of oil and gas wells in the vicinity of the lek. These wells also reduce habitat quality for sage-grouse on the allotment.

The allotment also provides habitat for two additional BLM sensitive species, bald eagles and Brewer's sparrow. In general, bald eagles would utilize the allotment during the winter months when opportunistically feeding on winter killed big game species.

Brewer's sparrows are a summer resident in Colorado and nest in sagebrush stands. Nests are constructed in sagebrush and other shrubs in denser patches of shrubs. This species would likely be nesting in the Proposed Action area from mid-May through mid-July.

Environmental Consequences, Proposed Action:

Greater sage-grouse
Season of livestock use coincides with sage-grouse nesting and early brood rearing on the allotment. Grazing during the nesting season has the potential to result in trampling of nests or disturbance of nesting females. Livestock grazing can also influence grouse indirectly by altering habitat components, primarily herbaceous cover. Both residual and new growth herbaceous cover are important for sage-grouse nest concealment.

The Proposed Action for the allotment would limit cattle grazing to just 30 days in the spring. This grazing system would allow for adequate plant recovery, regrowth and seed dissemination. In regards to herbaceous understory, new growth would be subject to grazing pressure however, residual growth would be available during the majority of the nesting season since grazing would not begin until the latter part of nesting. Residual grass cover should be adequate for nest concealment. The likelihood of sage-grouse nesting on the allotment has been reduced due to oil and gas development in the area. Proposed grazing on this allotment would be compatible with greater sage-grouse habitat needs.

Bald eagle
During the winter, bald eagles are likely present within or near the allotment, feeding on road or winter killed big game. The Proposed Action should maintain vegetative conditions in the allotment, which should continue to provide suitable habitat for upland prey species. Overall this alternative should be compatible with maintaining healthy habitat for bald eagles and prey species.

Brewer's sparrow
Impacts to Brewer's sparrow can be found in the Migratory Bird Section of this EA.

Environmental Consequences, No Grazing Alternative: This alternative would lead to increases/improvements in vertical structure, composition and density of herbaceous understory on the allotments as a whole from current conditions. Benefits associated with livestock removal would be most expected in those areas that currently experience concentrated livestock use (such as water sources). Improvements in herbaceous understory (height and density) would enhance nesting conditions for greater sage-grouse throughout the allotments as a whole. However, due to oil and gas development in the area, these benefits would be negligible.

Environmental Consequences, Cumulative Impacts: The primary use of the allotments and the surrounding area is livestock grazing, recreation (hunting) and oil and gas development. Continuation of grazing would not be expected to add substantially to existing or proposed disturbances.

3.3.4 Upland Vegetation

Affected Environment: The allotment lies within a Wyoming big sagebrush-grass plant community. Dominant plants present include Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), basin big sagebrush (*A. tridentata tridentata*), silver sagebrush (*A. cana*), Wood's rose (*Rosa woodsii*), rubber rabbitbrush (*Chrysothamnus nauseous*), lupine (*Lupinus* spp.), wooly loco (*Astragalus* spp.), yarrow (*Achillea millefolium*), longleaf phlox (*Phlox longifolia*), western wheatgrass (*Agropyron smithii*), needle-and-thread (*Stipa comata*), and Sandberg bluegrass (*Poa sandbergii*). Non-native plants present include crested wheatgrass (*Agropyron cristatum*), sulphur cinquefoil (*Potentilla recta*), cheatgrass (*Bromus tectorum*), and yellow alyssum (*Alyssum alyssoides*). Non-native species are present throughout, but only crested wheatgrass is a significant part of the perennial plant community.

The allotment consists of formerly private land that was returned to federal ownership in the late 1930's. The Soil Conservation Service mechanically removed 100 acres of sagebrush on the south side of the allotment, reseeded 40 acres in the southern portion to crested wheatgrass and planted several trees and shrubs along Bighole Gulch.

In 2004, approximately 44 acres of big sagebrush on upland sites and ephemeral drainages within the allotment was mechanically treated (brush beat) in a mosaic pattern. This mechanical removal of big sagebrush did not remove the herbaceous components of the plant community and left a number of younger big sagebrush and rabbitbrush plants intact. The result is an overall more diverse allotment with areas of higher densities of grasses and forbs within the treated areas relative to the untreated areas.

Environmental Consequences, Proposed Action: Limited spring use in on the cool-season forage species present in the allotment would maintain the abundance and vigor of these species. Needle-and-thread provides an important component of forage, particularly during May and June. After it sets seed and becomes dormant in July, it's quality and availability as a forage species declines dramatically.

Spring use by cattle would result in the greatest use occurring on new spring growth of new grasses. On arid and semi-arid rangelands, the period of early vegetative development before flowering or during early floral formation is one of the periods of least sensitivity to grazing (Brown 1995). Grazing use as proposed would allow for growth and regrowth without livestock grazing pressure prior to the more sensitive late vegetative stage. In addition, cattle tend to disperse their grazing use throughout the uplands more in the spring due to the greater availability of highly palatable spring growth. Concentration in and around water sources is also greatly reduced during this time. The proposed use would not adversely impact the forage resource as use would not continue into the late vegetative or flowering periods for grasses and would be well dispersed throughout the uplands; current conditions are an indication that the stocking level is appropriate.

The inclusion of drought management actions would benefit the long-term productivity and health of the plant community. Repeated grazing can be detrimental to forage plants during

periods of limited water availability. Drought stress hinders the ability of plants to produce biomass. This results in a loss of root mass which further hinders the ability of the plant to transport water and nutrients necessary for production of photosynthetic material and reproduction. In times of drought, the need to protect the ability of perennial plants retain as much photosynthetic material as possible in order to reduce dependence on carbohydrate reserves is critical to maintaining plant survival and the long-term productivity of the community (Brown 1995). By allowing for the reduction or complete rest from grazing during times of drought stress, the BLM can have the administrative tools necessary to ensure that livestock grazing doesn't exacerbate drought stresses on the plant community and that the long-term productivity and capability of the community to produce livestock forage in normal or above normal precipitation years is maintained.

Environmental Consequences, No Action Alternative: This alternative would have very similar impacts to those described above. Drought management actions would only occur on either a voluntary basis or through BLM actions based on a separate NEPA analysis.

Environmental Consequences, No Grazing Alternative: Herbivory by domestic livestock would not occur, but use by wildlife would continue. There would be more standing herbaceous biomass, particularly during the summer and fall months, potentially providing additional fuel for wildfire and increasing the susceptibility of the allotment to wildfire. Perennial grasses such as crested wheatgrass, which respond strongly to grazing by quickly growing new leaves after grazing, would, over time, lose vigor and productivity.

Environmental Consequences, Cumulative Impacts: This allotment has been grazed by livestock since at least the late 19th century. After lands within the allotment were patented, but before they were returned to federal ownership, common practices such as mechanical sagebrush removal and seeding of the non-native, but highly productive forage grass, crested wheatgrass, occurred on the allotment. Due to the relative productivity of the plant community within this allotment, the old sagebrush treatments are no longer visible, but crested wheatgrass remains throughout the allotment as a co-dominant with native perennial grasses. More recent mechanical sagebrush-removal projects have occurred, with an accompanying short-term increase in the density and abundance of herbaceous species, though even these more recent treatments are quickly recolonizing with big sagebrush. There are two gas wells within the allotment, one that was drilled within the last twenty years and another that was drilled within the last ten. The development of each well completely removed approximately two acres of vegetation, and this removal persists as the wells are currently producing. Prior to the permitting of cattle grazing in a 30 day spring window, the allotment was grazed by cattle continuously, spring through fall.

<u>Reference</u>

Brown, Ray W.
1995 *The Water Relations of Rangeland Plants: Adaptations to Water Deficits*. Chapter in: *Rangeland Plant Physiology and Morphology*, Society for Range Management, D. Bedunah and R.E. Sosebee (eds.)

3.3.5 Wetlands and Riparian Zones

Affected Environment: There is an approximately one mile ephemeral stretch of Bighole Gulch, a tributary to the Little Snake River within the allotment. It was last assessed in late July 2010 and was meeting standards, but with no trend noticed in condition when compared to prior observations. Livestock use in the drainage was noted (hoof prints, wetland plant utilization).

Environmental Consequences, Proposed Action: This alternative would maintain or potentially improve the short reach of Bighole Gulch. The relatively short allowable grazing period (≤30 days) in spring/early summer, with removal of livestock one week early every other year would reduce pressure on this singular water source and maintain vigor and reproduction of riparian vegetation over time. The inclusion of a drought management plan would further protect riparian vegetation by temporarily removing or reducing livestock pressure from the allotment until the community shows signs of adequate recovery.

Environmental Consequences, No Action Alternative: This alternative would have very similar impacts to those described above. However, drought management planning and subsequent actions would only occur on either a voluntary basis or through BLM actions based on a separate NEPA analysis, which may harm riparian vegetation during exceptionally dry periods when livestock would certainly congregate here in the absence of upland water developments elsewhere in the allotment.

Environmental Consequences, No Grazing Alternative: Removing cattle grazing from the allotment would improve the condition of Bighole Gulch over the long-term. A decrease in herbivory on riparian vegetation and trampling pressure caused by livestock in the riparian area would increase soil moisture and reduce the potential for erosion and any associated changes to wetland form/function, particularly in low and moderate gradient stream where the presence of riparian vegetation is one of the most important factors in maintaining stability. In ephemeral drainages, reduced livestock grazing pressure would also maintain or raise seasonal water tables during the dry season to a point where facultative and obligate riparian plant species would be able to persist or even expand. However, these benefits would not fully be realized if the riparian resource is used by wildlife, particularly ungulates, since wildlife can also have similar impacts to riparian resources, especially during periods of drought. Also, livestock grazing on adjacent private and other non-federal lands would continue to produce direct effects to riparian resources that would indirectly affect riparian resources on federally managed lands.

Environmental Consequences, Cumulative Impacts: Past, present, and reasonably foreseeable actions that affect riparian areas in the Great Divide vicinity primarily include ranching, some fluid mineral exploration and development, and the infrastructural development necessary to support these two activities.

The Great Divide vicinity is characterized by relatively low gradient ephemeral drainages, some of which have parallel dirt or gravel roads. The effect to riparian areas due to any fluid mineral and infrastructural development is primarily sedimentation, a result of the

construction and maintenance of roads and pads adjacent to any riparian areas in the watershed. The portion of sediment that is delivered to the few perennial drainages is not known, but is most likely to occur during the spring snowmelt runoff and summer storm events.

Most land in Great Divide vicinity is privately held; public lands within the basin are intermixed with private and state lands, which are also included in many of the grazing allotments. Where land health/riparian assessments are available, riparian standards are mostly being met. Roads adjacent to the floodplain or the presence of invasive species are usually cited as compromising riparian health in these instances. Livestock use of riparian areas on public lands is light to moderate, as many private portions of the allotments include water developments that help to keep extended livestock use away from these sensitive areas. Riparian condition on private lands within the watershed is not known.

3.3.6 Wildlife, Terrestrial

Affected Environment: Plant communities within the allotment are comprised primarily of sagebrush stands and grasslands. A variety of wildlife habitats and their associated species occur in the general area. Common species such as coyotes, cottontail rabbits, and ground squirrels likely use these habitats. The allotment provides year round habitat for mule deer and pronghorn and winter habitat for elk.

Environmental Consequences, Proposed Action and No Action Alternatives: Livestock grazing can alter vegetation structure, composition and function. Effects on terrestrial wildlife are dependent on the species of interest and may be adverse or beneficial depending on grazing: numbers, timing, frequency and intensity. Under either alternative, grazing schedule would allow for adequate plant recovery, regrowth, and seed dissemination. This type of grazing schedule would be compatible with maintaining suitable habitat for a variety of wildlife species.

Environmental Consequences, No Grazing Alternative: This alternative would lead to increases/improvements in vertical structure, composition and density of herbaceous understory on the allotments as a whole from current conditions. Benefits associated with livestock removal would be most expected in those areas that currently experience concentrated livestock use (such as water sources). Overall, wildlife species that would receive the most benefit would be grazing species and species that use herbaceous understory for hiding cover and nest concealment.

Environmental Consequences, Cumulative Impacts: Cumulative impacts to terrestrial wildlife would be similar to cumulative impacts described in section 3.3.2 Migratory Birds.

3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.4.1 Cultural Resources

Affected Environment: The BLM's authorization of grazing permits is considered an undertaking subject to compliance with Section 106 of the National Historic Preservation Act (NHPA). The BLM has the legal responsibility to consider the effects of its actions on cultural resources located on federal land. BLM Manual 8100 Series; the Colorado State Protocol; and BLM Colorado Handbook of Guidelines and Procedures for Identification, Evaluation, and Mitigation of Cultural Resources provide guidance on Section 106 compliance requirements to meet appropriate cultural resource standards. Section 106 of NHPA requires federal agencies to: 1) inventory cultural resources within federal undertaking Areas of Potential Effect (APEs), 2) evaluate the significance of cultural resources by determining National Register of Historic Places (NRHP) eligibility and, 3) consult with applicable federal, state, and tribal entities regarding inventory results, NRHP eligibility determinations, and proposed methods to avoid or mitigate potential impacts to eligible sites.

In Colorado, the BLM's NHPA obligations are carried out under a Programmatic Agreement (PA) among the BLM, the Advisory Council on Historic Preservation, and the State Historic Preservation Officer (SHPO). Should an undertaking be determined to have "no effect" or "no adverse effect" by the BLM-LSFO archaeologist, the undertaking may proceed under the terms and conditions of the PA. If the undertaking is determined to have "adverse effects," project-specific consultation is then initiated with the SHPO. Additionally, cultural resources assessment of grazing allotments follows the procedures and guidance of the Colorado BLM State Director as provided in BLM Instructional Memorandums (IMs) IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, and IM CO-2002-29.

The cultural history of northwestern Colorado is presented among several recent context studies. Reed and Metcalf's (1999) study of the Northern Colorado River Basin provides applicable prehistoric and historic overviews as compiled by Frederic J. Athearn (1982) and Michael B. Husband (1984). A historical archaeology context also was prepared for the State of Colorado by Church et al. (2007). Furthermore, significant cultural resources administered by the BLM-LSFO are provided in a Class 1 (archival) overview (McDonald and Metcalf 2006), in addition to valuable contextual data provided by synthesis reports of archaeological investigations conducted for a series of large pipeline projects in the BLM-LSFO management area (Metcalf and Reed 2011; Rhode and others 2010; Reed and Metcalf 2009).

A Class 1 cultural resources assessment was completed for the LU 257 Allotment by BLM-LSFO cultural program staff on March 6, 2014. Data reviewed were obtained from BLM-LSFO cultural program project files, site reports, and atlases, in addition to BLM-maintained General Land Office (GLO) plats and patent records. Electronic files also were reviewed through online cultural resource databases including *Compass* (maintained by the Colorado Office of Archaeology and Historic Preservation) and the National Register Information System (NRIS; maintained by the National Park Service). The results of

archival research are summarized in the following table; data provided are focused on BLM-administered lands within the specified allotments, and based on information available from the above-referenced sources.

Allotment No. (BLM acres)	BLM Acres Previously Surveyed	BLM Acres NOT Surveyed	Percent of BLM Acres Inventoried Within Allotment	Identified NRHP-Eligible or Needs Data Sites	Estimated Sites Within Allotment*	Estimated NRHP-Eligible or Needs Data Sites Within Allotment*
04547 (215)	92	123	74.8	1	6	2

*Estimated site density as based on existing inventory data. Estimates may be revised (up or down) by future inventories and/or consultations.

Background research indicates that prior cultural resource assessments have covered approximately 92 acres of the allotment, and resulted in the identification of five cultural resource sites—one of which consists of the historic Great Divide Townsite (5MF.1712), located just beyond the allotment boundary. Documented cultural sites predominantly comprise historic-age features and/or camps that are likely associated with the former Great Divide settlement and one prehistoric lithic site (5MF.891). Of the documented cultural sites only two, the Great Divide Townsite and the prehistoric lithic site are considered historic properties (determined NRHP-eligible [5MF.1712] and recommended as "needs data" [5MF.891], respectively) and, therefore, warrant additional consideration.

In addition to the aforementioned cultural resource sites, historic-age GLO plats show evidence of previously constructed features within the subject allotment such as wagon roads and springs (possibly improved), however, such features are not likely to be considered significant (or NRHP-eligible), if they even still exist.

Based on the available data it is estimated that six cultural resource sites likely exist within the subject allotment, of which two may be evaluated as NRHP-eligible. As such, cultural resources inventory for the remaining 123 acres of BLM-administered lands within the subject allotment should be conducted within ten years of permit issuance. Subsequent inventory should focus on potential areas of livestock concentration and where background research indicates the potential for cultural resources. Additionally, identified NRHP-eligible and "needs data" sites should be monitored for potential livestock impacts; updates to the existing site records for the historic Great Divide Townsite (and associated features) should also be pursued. If, as a result of new assessment and/or monitoring, NRHP-eligible sites or features are found to exhibit potential for or actively occurring impacts, mitigation measures will be identified and implemented in consultation among the BLM-LSFO, SHPO, and applicable consulting parties.

Environmental Consequences, Proposed Action and No Action Alternatives: Direct impacts to historic properties where livestock concentrate may include trampling, chiseling, and churning of site soils, cultural features and artifacts, artifact breakage, and impacts from standing, leaning, or rubbing against historic structures, above-ground cultural features and/or rock art (Broadhead 2001; Osbourn et al. 1987). Indirect impacts from livestock concentrations may include increased soil erosion and gullying, in addition to increased

potential for unlawful artifact collection and/or vandalism of cultural resources. Other indirect impacts may include degradation of the historic setting, thereby detracting from the view-shed and historic feeling of nearby cultural resource sites.

Environmental Consequences, No Grazing Alternative: While a no grazing alternative alleviates potential damage from livestock activities, cultural resources are constantly subject to site formation processes or events after creation (Binford 1981; Schiffer 1987). These processes can be both cultural and natural, and may occur instantly or over thousands of years. Cultural formation processes include activities directly or indirectly caused by humans. Natural processes include chemical, physical, and biological processes of the natural environment that impinge upon and/or modify cultural materials.

Environmental Consequences, Cumulative Impacts: Cumulative impacts to historic properties may occur within or adjacent to the allotment, including areas within the allotment view-shed. However, the region has been historically grazed (for more than 100 years) and the intensity of livestock use has generally decreased over time. Any extant historic property within or adjacent to the allotment—and where potential for impacts exist—are more likely to have sustained impacts as a result of prior livestock/grazing activities or other historic land-use activities (e.g., mining, agriculture, etc.). Although continued livestock use may not pose additional, direct impacts in areas where prior grazing was intensive, secondary effects such as increased erosion could cause long-term, irreversible effects to historic properties, where present. Livestock use also has increased ground visibility over time as a result of increased erosion and decreased ground cover, and by the installation and/or removal of range improvements such as stock ponds and pipelines. These factors may result in the exposure of cultural deposits that would otherwise remain obscured or buried, thereby raising the potential for illegal collection of cultural materials.

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2001 *Brief Synopsis of Experiments Concerning Effects of Grazing on Archaeological Sites*. Bureau of Land Management-Gunnison Field Office, Gunnison, Colorado.

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1987 *Formation Processes of the Archaeological Record*. University of New Mexico Press, Albuquerque.

CHAPTER 4– PUBLIC LAND HEALTH STANDARDS

4.1 INTRODUCTION

The LU 257Allotment was assessed for compliance with the Colorado Standards of Public Land Health by an interdisciplinary team consisting of five rangeland management specialists and two wildlife biologists on June 4, 2003 as part of the Powderwash Watershed Assessment.

4.2 COLORADO PUBLIC LAND HEALTH STANDARDS

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

4.2.1 Standard 1 Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Finding of most recent assessment: This standard is met. Soils show no evidence of movement, pedestalling, rills, or other signs of accelerated erosion. Litter is abundant and accumulating in place. Plant cover is sufficient to protect the soil surface from accelerated erosion.

Proposed and No Action Alternatives: The continuation of limited early growing season grazing followed by rest during the rest of the year would continue to allow the allotment to meet this standard.

No Grazing Alternative: Since this standard is met under current management, continuation of grazing under existing terms and conditions would not preclude this standard from continuing to be met.

4.2.2 Standard 2 Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Finding of most recent assessment: This standard is met. The most recent assessment in July 2010 found that the ephemeral drainage of Bighole Gulch is adequately supporting a stable and diverse riparian vegetative community. Livestock use of the areas was noted, but was not detracting from riparian form and function.

Proposed and No Action Alternatives: The continuation of limited early season grazing followed by rest during the rest of the year would continue to allow the allotment to meet this standard.

No Grazing Alternative: Since this standard is met under current management, continuation of grazing under existing terms and conditions would not preclude this standard from continuing to be met.

4.2.3 Standard 3 Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Finding of most recent assessment: This standard is met. Appropriate key species are present and in appropriate densities. The plant community is diverse and is capable of providing resilience to disturbance. The age class and structure of both woody and perennial species is contributing to desired objectives.

The allotment provides habitat for a variety of wildlife species. Elk, pronghorn and mule deer utilize this area for winter habitat. Overall, vegetative communities within the allotment are in good condition, providing suitable habitat for terrestrial wildlife species. Shrub cover was adequate to provide winter habitat for browsing species.

Proposed Action: The continuation of limited growing season grazing followed by complete rest during the rest of the year would continue to allow the allotment to meet this standard.

No Action Alternative: Since this standard is met under current management, continuation of grazing under existing terms and conditions would not preclude this standard from continuing to be met.

No Grazing Alternative: Cessation of livestock grazing would not adversely affect the ability of the allotment to meet this standard in the near term.

4.2.4 Standard 4 Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Finding of most recent assessment: The allotment provides habitat for three BLM sensitive species, greater sage-grouse, Brewer's sparrow, and bald eagle. Sagebrush stands on the allotment are healthy with an appropriate understory of grasses and forbs. This standard is currently being met for special status animal species. There are no federally listed threatened, endangered, or BLM sensitive plant species populations identified on this allotment. For plants, this standard does not apply.

All Alternatives: Standard 4 would continue to be met for special status wildlife species under all three alternatives.

4.2.5 Standard 5 The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Finding of most recent assessment: There are no perennial water bodies subject to this standard within the allotment. This standard does not apply.

SIGNATURE OF PREPARER:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED

Finding of No Significant Impact
DOI-BLM-CO-N010-2014-0011-EA

Based upon a review of this Environmental Assessment and the supporting documents, I have determined that the Proposed Action is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the Little Snake Record of Decision and Resource Management Plan (2011). An environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

Context: The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance.

Intensity: The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

1. Impacts that may be both beneficial and adverse
The beneficial effects of the Proposed Action includes: in authorizing public land grazing this action sustains the local economy as grazing operations would continue to supply personal income to the operator and employees, and would have a proportional influence on the regional, Colorado, and national economy. This action supports the western livestock industry. The authorized livestock operator(s) have mandatory and special terms and conditions that must be met to maintain their grazing preference. This provides a certain level of stewardship of public lands in that if these lands were to become degraded by any activity or event, natural or human in origin, grazing and or other authorized uses would be terminated. This stewardship role of the livestock operator not only mandates proper livestock and forage management but also provides communication with the BLM as to other activities or events that could cause degradation to public lands. Long term effects would be limited in scope.

2. Degree of effect on public health and safety
There would be no effects on public health and safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas
There are no park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas in the area of Proposed Action. As described in the EA, impacts to cultural resources were identified for the Proposed Action. As this action is not a new action but a continuation of historic land uses in this area there would be no affect to unique characteristics of the geographic area.

4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial
Public input regarding the Proposed Action has been solicited during the planning process. The BLM Little Snake Field Office sent out a Notice of Public Scoping on December 28, 2012 to determine the level of public interest, concern, and resource conditions on the grazing authorizations that were up for renewal in FY 2014. A Notice of Public Scoping was posted on the Internet, at the Colorado BLM Home Page, asking for public input on permit/lease renewals. Individual letters were sent to the affected permittees/lessees, informing them their permit/lease was up for renewal and requesting any information they wanted included in or taken into consideration during the renewal process. No comments were received.

5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk
No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration
The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts
No individually or cumulatively significant impacts were identified for the Proposed Action. Any adverse impacts identified for the Proposed Action, in conjunction with any adverse impacts of other past, present, or reasonably foreseeable future actions will result in negligible impacts to natural and cultural resources.

8. Degree to which the action may adversely affect district, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:
There would be no loss or destruction to these resources. A cultural resources study is initiated prior to any action considered an undertaking under Section 106 of the National Historic Preservation Act. Any adverse effects to Historic Properties are mitigated in consultation with the Colorado Office of Archaeology and Historic Preservation (SHPO).

9. Degree to which the action may adversely affect an endangered or threatened species or its critical habitat
There are no threatened or endangered species or habitats for such species present within this allotment.

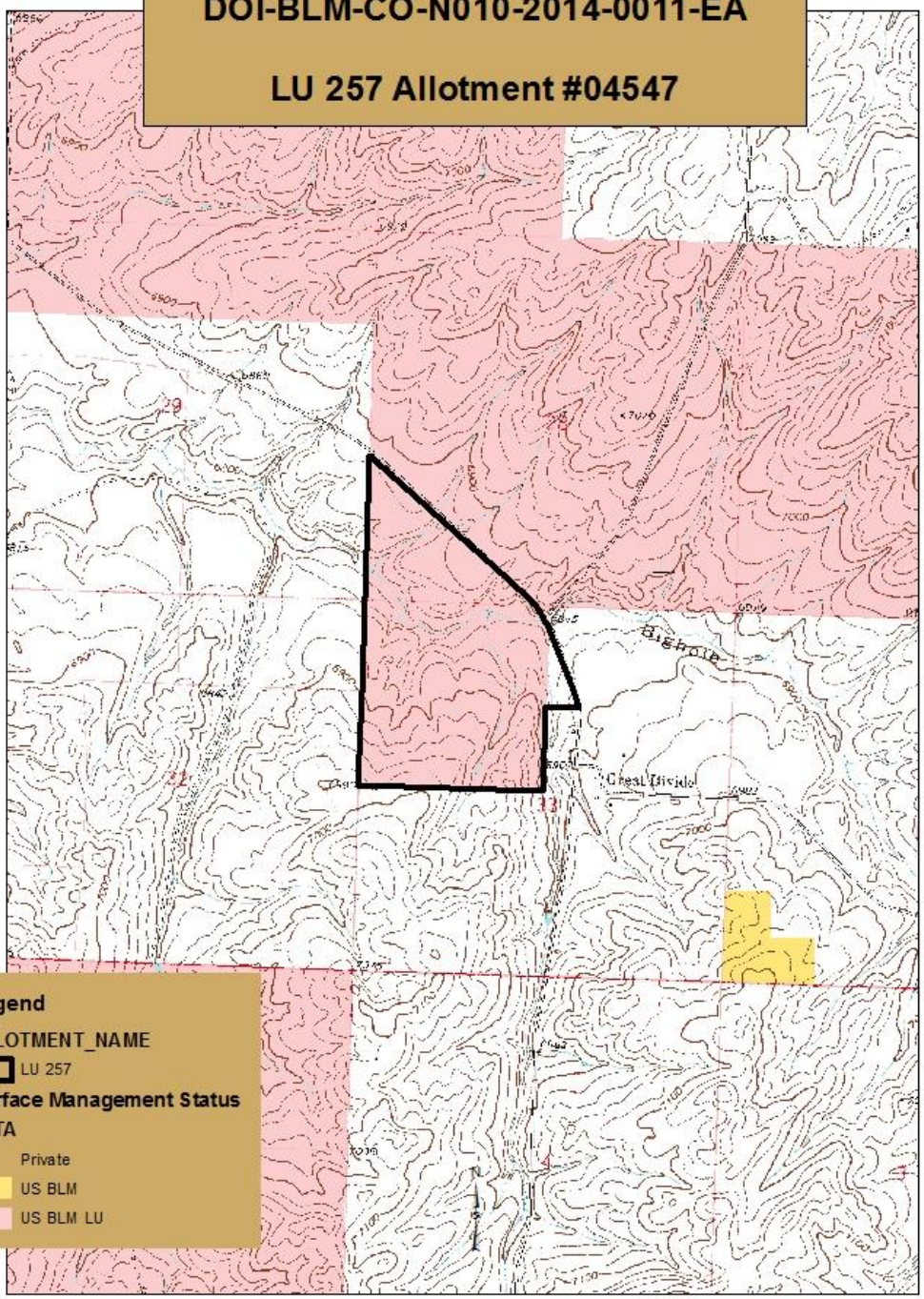
10. Whether the action threatens a violation of federal, state, or local environmental protection law
The Proposed Action violates no federal, state, or local environmental protection laws.

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Wendy Reynolds, Field Manager

DATE SIGNED:

Attachment 1
DOI-BLM-CO-N010-2014-0011-EA

LU 257 Allotment #04547



T 10 N R 93 W

Great Divide 7.5'

219 acres BLM LU
6 acres private

2/18/2014
JHS

ATTACHMENT #2
DOI-BLM-CO-N010-2014-0011-EA
TERMS AND CONDITIONS

Standard Terms and Conditions

1) Grazing permit or lease terms and conditions and the fees charged for grazing use are established in accordance with the provisions of the grazing regulations now or hereafter approved by the Secretary of the Interior.

2) They are subject to cancellation, in whole or in part, at any time because of:
   a. Noncompliance by the permittee/lessee with rules and regulations;
   b. Loss of control by the permittee/lessee of all or a part of the property upon which it is based;
   c. A transfer of grazing preference by the permittee/lessee to another party;
   d. A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described;
   e. Repeated willful unauthorized grazing use;
   f. Loss of qualifications to hold a permit or lease.

3) They are subject to the terms and conditions of allotment management plans if such plans have been prepared. Allotment management plans MUST be incorporated in permits and leases when completed.

4) Those holding permits or leases MUST own or control and be responsible for the management of livestock authorized to graze.

5) The authorized officer may require counting and/or additional or special marking or tagging of the livestock authorized to graze.

6) The permittee's/lessee's grazing case file is available for public inspection as required by the Freedom of Information Act.

7) Grazing permits or leases are subject to the nondiscrimination clauses set forth in Executive Order 11246 of September 24, 1964, as amended. A copy of this order may be obtained from the authorized officer.

8) Livestock grazing use that is different from that authorized by a permit or lease MUST be applied for prior to the grazing period and MUST be filed with and approved by the authorized officer before grazing use can be made.

9) Billing notices are issued which specify fees due. Billing notices, when paid, become a part of the grazing permit or lease. Grazing use cannot be authorized during any period of delinquency in the payment of amounts due, including settlement for unauthorized use.

10) Grazing fee payments are due on the date specified on the billing notice and MUST be paid in full within 15 days of the due date, except as otherwise provided in the grazing permit or lease. If payment is not made within that time frame, a late fee (the greater of $25 or 10 percent of the amount owed but not more than $250) will be assessed.

11) No member of, or Delegate to, Congress or Resident Commissioner, after his/her election of appointment, or either before or after he/she has qualified, and during his/her continuance in office, and no officer, agent, or employee of the Department of Interior, other than members of Advisory committees appointed in accordance with the Federal Advisory Committee Act (5 U.S.C. App. 1) and Sections 309 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) shall be admitted to any share or part in a permit or lease, or derive any benefit to arise therefrom; and the provision of Section 3741 Revised Statute (41 U.S.C. 22), 18 U.S.C. Sections 431-433, and 43 CFR Part 7, enter into and form a part of a grazing permit or lease, so far as the same may be applicable.

Common Terms and Conditions

A) Grazing use will not be authorized in excess of the amount of specified grazing use (AUM number) for each allotment. Numbers of livestock annually authorized in the allotment(s) may be more or less than the number listed on the permit/lease within the grazing use periods as long as the amount of specified grazing use is not exceeded.

B) Unless there is a specific term and condition addressing utilization, the intensity of grazing use will insure that no more than 50% of the key grass species and 40% of the key browse species current year's growth, by weight, is utilized at the end of the grazing season for winter allotments and the end of the growing season for allotments used during the growing season. Application of this term needs to recognize recurring livestock management that includes opportunity for regrowth, opportunity for spring growth prior to grazing, or growing season deferment.

C) Failure to maintain range improvements to BLM standards in accordance with signed cooperative agreements and/or range improvement permits may result in the suspension of the annual grazing authorization, cancellation of the cooperative agreement or range improvement permit, and/or the eventual cancellation of this permit/lease.

D) Pursuant to 43 CFR 10.4(g), the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

The operator is responsible for informing all persons who are associated with the allotment operations that they will be subject to prosecution for knowingly disturbing

historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any allotment activities or grazing activities, the operator is to immediately stop activities in the immediate vicinity and immediately contact the authorized officer. Within five working days the authorized officer will inform the operator as to:

-whether the materials appear eligible for the National Register of Historic Places;
-the mitigation measures the operator will likely have to undertake before the identified area can be used for grazing activities again.

If paleontological materials (fossils) are uncovered during allotment activities, the operator is to immediately stop activities that might further disturb such materials and contact the authorized officer. The operator and the authorized officer will consult and determine the best options for avoiding or mitigating paleontological site damage.

E) No hazardous materials/hazardous or solid waste/trash shall be disposed of on public lands. If a release does occur, it shall immediately be reported to this office at (970) 826-5000.

F) The permittee/lessee shall provide reasonable administrative access across private and leased lands to the BLM and its agents for the orderly management and protection of public lands.

G) Application of a chemical or release of pathogens or insects on public lands must be approved by the authorized officer.

I) The terms and conditions of this permit/lease may be modified if additional information indicates that revision is necessary to conform with 43 CFR 4180.

Attachment 3
DOI-BLM-CO-N010-2014-0011-EA
Drought Management
Indicators, Triggers, and Responses

Drought Indicators

Drought indicators are observations signaling the start or continuation of a drought. The following discussion identifies the indicators that would be used to determine the onset and/or continuation of a drought.

The U.S. Drought Monitor (http://droughtmonitor.unl.edu/) would be consulted to determine if weather conditions indicate drought and to identify affected areas. Site visits to the allotment and within drought-afflicted areas would be used to evaluate the current condition of water resources and determine if water shortages exist.

The U.S. Drought Monitor and the Vegetation Drought Response Index (VegDRI) (http://vegdri.unl.edu/) would be consulted to determine drought afflicted areas and vegetation condition as it pertains to drought stress. Site visits to the allotment within drought-afflicted areas would be used to evaluate the current condition and production of key forage species as described in the associated Ecological Site Descriptions (ESDs) for the area. In instances where key species referenced in the ESD are absent, key species would be identified using site-specific and/or existing monitoring data. Evaluations would be used to determine if plants are exhibiting signs of drought stress and if forage shortages exist. Signs of drought stress include reduced shoot and leaf growth, reduction in seed head development, induced senescence (i.e., premature aging), and plant death.

Drought Triggers

Drought response triggers are thresholds associated with forage and water resources that indicate the need for a site-specific drought response. Triggers would be used separately or in combination to activate Drought Response Actions (DRAs). These triggers have been placed into two categories: water and forage. The following is a list of the triggers for both categories:

1. Water

This trigger is based on the presence or absence of available water. Field visits would be conducted in drought-afflicted areas to determine if there are adequate water sources (natural and/or developed) to provide for the management and/or distribution of wildlife and livestock while maintaining riparian area functionality or the health of upland areas surrounding developed water sources. Since there are no developed water sources on this allotment, the availability of water on the adjacent private lands that are used in conjunction with this allotment would be assessed.

Water would be classified as “available” or “unavailable” within areas affected by drought. “Available” is defined as an amount of water sufficient to provide a safe and reliable source of drinking water for wildlife and livestock while maintaining resource values associated with the riparian area along Bighole Gulch. Resource values associated with riparian areas include riparian vegetation, bank stability, wildlife habitat, and water quality.

"Unavailable" is defined as an absence of water or an amount of water that is insufficient to provide a safe and reliable source of drinking water for wildlife and livestock while maintaining resource values.

Field observations and professional judgment would be used to determine availability. Criteria such as reduced quantity, noticeable accumulation of animal waste, and unsafe conditions due to mud or severely eroded banks would be used.

2. Forage

To survive, perennial plants must accumulate both above ground (shoot growth) and below ground (root growth) biomass through the process of photosynthesis, transpiration, and respiration. A lack of available soil moisture usually reduces the length of the growing season. A shorter growing season directly impacts above and below ground production and ultimately forage quantity. The degree to which drought impairs the range's potential for future forage production depends on the intensity, frequency, and timing of grazing. Drought afflicted rangelands are unable to support pre-drought stocking levels. Excessive utilization during drought can negatively impact plant health and impair the ability to meet, or make significant progress towards fulfillment of, the standards and guidelines of rangeland health. Permitted livestock grazing levels should be conservative so that grazing plans and grazing use levels can be sustained during periods of drought.

The following drought response triggers associated with forage are intended to ensuring proper utilization levels of upland and riparian key species, as described in the ESD associated with the site. In instances where key species referenced in the ESD are absent, key species would be identified using site-specific and/or past monitoring data. Appropriate utilization levels provide adequate residual matter for the maintenance of plant health especially during a drought. The triggers have been organized into three categories; utilization and stubble height triggers by vegetation community, livestock distribution, and plant production/drought stress.

-Utilization and Stubble Height

Utilization triggers were developed using the utilization guidelines proved by Holechek et al. (1988). The guidelines provide a range of use associated with rangeland condition. For the purpose of grazing management during times of drought, the BLM has chosen to limit utilization of key species to the lower utilization level. The lower utilization levels are consistent with those suggested for ranges in poor condition. These were chosen due to the reduced vigor and production of range forage plants resulting from drought. The following utilization levels would function as drought response triggers within each respective vegetation community and would trigger the implementation of DRAs. Stubble height triggers were developed to ensure adequate residual matter remains to maintain riparian plant communities. Generally, stubble heights of 4 to 6 inches provide effective stream bank protection, prevent sedimentation, and maintain or improve plant communities. Key species would be identified using the ESD for a specific area. In instances where key species referenced in the ESD are absent key species would be identified using site-specific and/or existing monitoring data.

- 25 % utilization of key species. -**Sagebrush Grassland**
- 30% Utilization of key species. -**Riparian Zones**
- Four inch stubble height of key riparian species.

-Plant Production and/or Drought Stress

The following plant production and/or drought stress indicators would trigger DRAs:

-Drought induced senescence or reduced production of key upland and/or riparian species which results in an insufficient quantity of forage for wildlife and livestock;

-Drought induced senescence of key riparian herbaceous species which results in insufficient plant growth/height to provide for stubble heights equal to or greater than four inches within riparian areas; and

-Noticeable signs of drought stress which impede the ability of key species to complete their life cycle (e.g., drought induced senescence, reduced seed head development, etc.).

Drought Responses

The following DRAs would be implemented either separately or in combination upon reaching the criteria described under the drought response triggers section. These have been separated due to the differing nature and capabilities for management of livestock and wild horses and burros. Drought response actions would be selected based on site-specific information. In areas where livestock and wild horse and burro use overlaps, both livestock and wild horse and burro DRAs would be implemented concurrently.

DRAs would be selected on a case-by-case basis using site-specific monitoring data. The following process would be used for DRA selection:

Step 1: Conduct field visits to "drought-afflicted" areas to assess drought response triggers. Field visits would assess water and forage availability at predetermined sites.

Step 2: Pursuant to 43 CFR §4110.3-3(b), consult with, or make a reasonable attempt to consult with, affected permittees or lessees to determine appropriate DRA(s) to alleviate drought impacts. DRAs would be selected using site-specific monitoring data and chosen on case-by-case basis suited to site-specific conditions. More than one DRA could be selected depending on conditions. Efforts should be made to select DRAs that could be implemented in a subsequent fashion to respond to changes in drought conditions.

Step 3: Implement DRAs in selected order. Order would be determined based on site-specific monitoring data.

Step 4: Resort to partial or full closure of an allotment. Partial or full closure would be required on an allotment if: 1) a permittee or lessee fails to voluntarily apply to implement appropriate DRA(s) after "a reasonable attempt" (43 CFR 4.110.3-3(b)) has been made to consult with that permittee or lessee, or 2) all feasible livestock DRAs have been exhausted and immediate protection of resources on the allotment is required.

The following is a list of DRAs that would be used either separately or in combination to reduce the impacts of authorized livestock grazing on natural resources during drought.

-Temporary Complete Closure of the Allotment

If it is determined that drought conditions (i.e., lack of forage and/or water, poor condition, and/or critical areas that provide forage and/or water for wildlife) exist over the entire allotment and all other livestock DRA options have been exhausted or deemed impractical, complete closure could occur (43 CFR 4710.5). Closure would be in effect for the duration of the drought plus one growing season following the cessation of the drought to allow for recovery. The U.S. Drought Monitor and Vegetation Drought Response Index would be consulted to determine the cessation of the drought. Written notice signed by the authorized officer would be used to reopen the allotment to livestock grazing.

-Temporary Partial Reduction in Animal Unit Months (AUMs)

During drought, a reduction in livestock numbers could be necessary to ensure that adequate forage is available to meet wildlife and livestock requirements. Reduced livestock grazing would prevent overutilization of key forage species and prevent further adverse impacts to rangeland resources that are already affected by drought.

-Temporary Change in Season of Use

A change in the season of use could reduce livestock grazing related impacts during drought. The following modifications could be used either separately or in combination: Changing the season of use to a time following the critical growth period (actual dates would vary with vegetation community type) of key forage species (ESDs correlated to specific locations would be consulted to determine key species. In instances where key species referenced in the ESD are absent, key species would be identified using site-specific and/or past monitoring data).

- This would allow plants to utilize available soil moisture and any additional moisture received during the critical growth period. Plants would be able to complete their life cycle thus allowing for seed dissemination and root growth and replacement. Plants could then be grazed after sufficient growth or dormancy occurs. Repeated grazing during the critical growth period does not allow plants to regrow before soil moisture is depleted; therefore, plants may not have adequate resource reserves to survive winter dormancy.
- Defer livestock grazing in riparian areas during the hot season (approximately July 1 through September 30) to avoid the degradation of riparian areas during drought.

-Temporary Reduced Grazing Duration

Reducing grazing duration would increase a plant's ability to utilize available resources to regrow foliage, store carbohydrates reserves, and maintain vigor. Plants are unable to regrow if grazed repeatedly especially during times of limited soil moisture. Periods of deferment would be varied according to the rate of growth. Range plants initiate growth from meristems (i.e., growing points), once meristems are removed, plants must grow from basal buds which requires much more of the

plants energy than regrowth from meristems. Plants that are continually forced to regrow from buds may reduce or even eliminate the production of new buds, which may reduce production in subsequent years. During stress periods such as drought, growth slows and plants should be rested longer. Reducing the duration of grazing would provide plants more time to recover after grazing pressure is removed.